

In the claims:

1 - 25. (Canceled).

26. (Currently amended) A genetically modified or viral infected plant or cultured plant cells expressing a fusion protein including a recombinant protein and a cellulose binding peptide ~~separated therebetween via a unique amino acid sequence recognizable and digestible by a protease or under predetermined cis or trans conditions for digesting a controllable intervening protein sequence~~, wherein said fusion protein is compartmentalized within a cellular compartment of cells of said plant or cultured plant cells, so as to be sequestered from cell walls of said cells of said plant or cultured plant cells, said cellular compartment is selected from the group consisting of an endoplasmatic riculum, a golgi apparatus, an oil body, a starch body, a chloroplastid, a chloroplast, a chromoplastid, a chromoplast, a vacuole, a lysosome, a mitochondrium and a nucleus.

27. (Canceled).

28. (Previously presented) The genetically modified or viral infected plant or cultured plant cells of claim 26, wherein expression of said fusion protein is under a control of a constitutive or tissue specific plant promoter.

29. (New) The genetically modified or viral infected plant or cultured plant cells of claim 26, wherein said fusion protein includes a signal peptide capable of targeting said fusion protein to said cellular compartment and/or a retaining peptide capable of retaining said fusion protein in said cellular compartment.

30. (New) The genetically modified or viral infected plant or cultured plant cells of claim 29, wherein said cellular compartment is endoplasmatic reticulum.

31. (New) The genetically modified or viral infected plant or cultured

plant cells of claim 30, wherein said signal peptide is Cel 1 or rice amylase signal peptide.

32. (New) The genetically modified or viral infected plant or cultured plant cells of claim 30, wherein said fusion protein further includes a retaining peptide sequence as set forth in SEQ ID NO: 1 or 2.

33. (New) The genetically modified or viral infected plant or cultured plant cells of claim 26, wherein said recombinant protein and said cellulose binding peptide are separated therebetween via an amino acid sequence recognizable and digestible by a protease or cleavable under predetermined conditions.

34. (New) The genetically modified or viral infected plant or cultured plant cells of claim 33, wherein said predetermined conditions are selected from the group consisting of an exposure to an increased temperature, an exposure to light and an exposure to a chemical reagent.